

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1 to 8. (canceled).

9. (new) A cell that expresses a ligand responsive transcriptional regulatory factor and that comprises the following genes (a) and (b) integrated into at least one chromosome of the cell:

(a) a first reporter gene that encodes a protein having an activity that can be quantitatively assayed, operatively linked to a first promoter, the transcription level of which is regulated by the ligand responsive transcriptional regulatory factor; and

(b) a second reporter gene that encodes a protein distinguishable from the protein encoded by the first reporter gene and having an activity that can be quantitatively assayed, operatively linked to a second promoter, the transcription level of which is not regulated by the ligand responsive transcription regulatory factor.

10. (new) The cell of claim 9, in which the second promoter is a constitutive promoter.

11. (new) The cell of claim 9, in which the transcription level of the first reporter gene in the cell changes upon contact of the ligand responsive transcription regulatory factor with a dioxin compound.

12. (new) The cell of claim 10, in which the transcription level of the first reporter gene in the cell changes upon contact of the ligand responsive transcription regulatory factor with a dioxin compound.

13. (new) The cell of claim 9, in which the first promoter comprises a glucocorticoid response element, an estrogen response element or dioxin responsive element.

14. (new) The cell of claim 10, in which the first promoter comprises a glucocorticoid response element, an estrogen response element or dioxin responsive element.

15. (new) The cell of claim 9, that further expresses an aryl hydrocarbon receptor nuclear translocation protein.

16. (new) The cell of claim 10, that further expresses an aryl hydrocarbon receptor nuclear translocation protein.

17. (new) The cell of claim 11, that further expresses an aryl hydrocarbon receptor nuclear translocation protein.

18. (new) The cell of claim 12, that further expresses an aryl hydrocarbon receptor nuclear translocation protein.

19. (new) The cell of claim 13, that further expresses an aryl hydrocarbon receptor nuclear translocation protein.

20. (new) The cell of claim 14, that further expresses an aryl hydrocarbon receptor nuclear translocation protein.

21. (new) A cell that expresses an aryl hydrocarbon receptor and that comprises the following genes (a) and (b) integrated into at least one chromosome of the cell:

(a) a first reporter gene that encodes a protein having an activity that can be quantitatively assayed, operatively linked to a first promoter, the transcription level of which is regulated by ligand binding to the aryl hydrocarbon receptor; and

(b) a second reporter gene that encodes a protein distinguishable from the protein encoded by the first reporter gene and having an activity that can be quantitatively assayed, operatively linked to a second promoter, the transcription level of

which is not regulated by ligand binding to the aryl hydrocarbon receptor.

22. (new) The cell of claim 21, in which the second promoter is a constitutive promoter.

23. (new) The cell of claim 21, that further expresses an aryl hydrocarbon receptor nuclear translocation protein.

24. (new) The cell of claim 22, that further expresses an aryl hydrocarbon receptor nuclear translocation protein.

25. (new) A method for evaluating the agonist activity of a test substance against the activity of a ligand responsive transcriptional regulatory factor to promote transcription, comprising:

(1) culturing a cell according to claim 9 or 21 in the absence of the test substance, and measuring the activities of the proteins encoded by the first and second reporter genes in the cell; and

(2) culturing a cell according to claim 9 or 21 in the presence of the test substance and measuring the activities of the proteins encoded by the first and second reporter genes in the cell;

wherein steps (1) and (2) may be performed in either order;  
(3) comparing the activities measured in step (2) to the activities measured in step (1);

wherein the test substance is determined to be an agonist of the activity of the ligand responsive transcription regulatory factor if the comparison in step (3) demonstrates a higher activity of the protein encoded by the first reporter gene when the cell is cultured in the presence of the test substance than when the cell is cultured in the absence of the test substance,

wherein the activity of the protein encoded by the second reporter gene in the cell cultured in the presence of the test substance is basically unchanged from that in the cell cultured in the absence of the test substance.

26. (new) A method for evaluating the antagonist activity of a test substance against the activity of a ligand responsive transcriptional regulatory factor to promote transcription, comprising:

(1) culturing a cell according to claim 9 or 21 in the absence of the test substance, and measuring the activities of the proteins encoded by the first and second reporter genes in the cell; and

(2) culturing a cell according to claim 9 or 21 in the presence of the test substance and measuring the activities of the

proteins encoded by the first and second reporter genes in the cell;

wherein steps (1) and (2) may be performed in either order;

(3) comparing the activities measured in step (2) to the activities measured in step (1);

wherein the test substance is determined to be an antagonist of the activity of the ligand responsive transcription regulatory factor if the comparison in step (3) demonstrates a lower activity of the protein encoded by the first reporter gene when the cell is cultured in the presence of the test substance than when the cell is cultured in the absence of the test substance,

wherein the activity of the protein encoded by the second reporter gene in the cell cultured in the presence of the test substance is basically unchanged from that in the cell cultured in the absence of the test substance.